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10/500,441

03/17/2005

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5504-2PUS

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06/12/2007

EXAMINER

CHAU, COREY P

ART UNIT

PAPER NUMBER

2615

MAIL DATE

DELIVERY MODE

06/12/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/500,441

Applicant(s)

RODET ET AL.

Examiner

Corey P. Chau

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 9-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 6/18/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because the unlabeled rectangular box(es) shown in the drawings should be provided with descriptive text labels. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

### ***Claim Rejections - 35 USC § 112***

3. Claims 9 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 9 recites the limitation "the time" in line 2.

Claim 9 recites the limitation "the energy" in line 5.

Claim 9 recites the limitation "the energy" in line 8.

Art Unit: 2615

Claim 9 recites the limitation "the related phase" in line 8.

Claim 9 recites the limitation "the band of frequencies" in line 9.

Claim 9 recites the limitation "the universe" in lines 13-14.

Claim 11 recites the limitation "the component" in line 3.

Claim 11 recites the limitation "the classes" in line 6.

There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 9-15 rejected under 35 U.S.C. 102(e) as being anticipated by USPN 6657117 to Weare et al. (hereafter as Weare).

Art Unit: 2615

7. Regarding Claim 9, Weare discloses a method for characterizing, according to specific parameters, a sound signal  $x(t)$  evolving over the time  $t$  during a duration  $D$  into different bands of frequencies  $k$  and then recorded  $x(k, t)$ , comprising:

storing the signal  $x(t)$  (Figs. 1, 3, and 7-10; column 7, line 22 to column 8, line 16),

calculating and storing the energy  $E(k, t)$  of said signal  $x(k, t)$  for each of said bands of frequencies  $k$ ,  $k$  varying from 1 to  $K$  and according a temporal window  $h(t)$  of a duration of  $2N$  (Figs. 3, and 7-10; column 15, line 66 to column 16, line 25),

calculating and storing the energy  $F(k, j, t)$  and the related phase  $\phi(j, k, t)$  of  $E(k, t)$  for the bands of frequencies  $j$ ,  $j$  varying from 1 to  $J$  (Figs. 3, and 7-10; column 15, line 66 to column 16, line 25),

using a temporal window  $h'(t)$  of a duration of  $2N'$ , the  $J \times K$  values of the energy  $F(j, k, t)$  and of the related phase  $\phi(j, k, t)$  thus obtained constituting the specific parameters of an extract of a duration of  $2N'$  of the sound signal  $x(t)$  (Figs. 3, and 7-10; column 15, line 66 to column 16, line 25), and

reiterating said calculation at regular intervals in order to obtain the universe of the specific parameters for the duration  $D$  of the sound signal  $x(t)$  (abstract; Figs. 3, and 7-10; column, 14, line 56 to column 15, line 14; column 15, line 66 to column 16, line 25; column 18, lines 10-58).

8. Regarding Claim 10, Weare discloses calculating for each frequency band  $j$  the mean value of the energy  $E(k, t)$  over  $2N'$  seconds, reiterating said calculation at regular intervals in order to obtain the universe of specific parameters for the duration  $D$  of the

Art Unit: 2615

sound signal  $x(t)$ , and including the mean values obtained among the specific parameters of the sound signal  $x(t)$  (abstract; Figs. 3, and 7-10; column, 14, line 56 to column 15, line 14; column 15, line 66 to column 16, line 25; column 18, lines 10-58).

9. Regarding Claim 11, Weare discloses taking into account the specific parameters of a sound signal  $x(t)$  as the components of a vector representative of  $x(t)$ , positioning the vectors in a space of as many dimensions as there are parameters, defining the classes grouping the most proximate vectors, and recording said classes (abstract; Figs. 3, 4-5 and 7-10; column, 14, line 56 to column 15, line 14; column 15, line 66 to column 16, line 25; column 18, lines 10-58).

10. Regarding Claim 12, Weare discloses the classes have inter-class distances and intra-class distances, and further comprising: selecting from among the specific parameters, those parameters making it possible to obtain relatively large inter-class distances vis-a-vis the intra-class distances, and recording the selected parameters (abstract; Figs. 3, 4-5 and 7-10; column 6, lines 30-38; column 7, line 62 to column 8, line 16; column, 14, line 56 to column 15, line 14; column 15, line 66 to column 16, line 25; column 18, lines 10-58).

11. Regarding Claim 13, Weare discloses a device for identifying a sound signal, comprising: a database server comprising means for implementing the method for characterizing a sound signal according to specific parameters according to claim 9, and means for searching for said sound signal in the database (abstract; Figs. 3, 4-5 and 7-10; column 6, lines 30-38; column 7, line 62 to column 8, line 16; column, 14, line

Art Unit: 2615

56 to column 15, line 14; column 15, line 66 to column 16, line 25; column 18, lines 10-58).

12. Regarding Claim 14, Weare discloses a device for identifying a sound signal, comprising: a database server comprising means for implementing the method for characterizing a sound signal according to specific parameters according to claim 11, and means for searching for said sound signal in the database, wherein the means for searching comprise means for recognizing the class to which said sound signal belongs and the means for comparing, by the method of the nearest neighbor algorithm, specific parameters of the unknown sound signal with the specific parameters of the database (abstract; Figs. 3, 4-5 and 7-10; column 5, lines 8-25; column 6, lines 30-38; column 7, line 62 to column 8, line 16; column, 14, line 56 to column 15, line 14; column 15, line 66 to column 16, line 25; column 18, lines 10-58).

13. Regarding Claim 15, Weare discloses a device for identifying a sound signal, comprising: a database server comprising means for implementing the method for characterizing a sound signal according to specific parameters according to claim 12, and means for searching for said sound signal in the database, wherein the means for searching comprise means for recognizing the class to which said sound signal belongs and the means for comparing, by the method of the nearest neighbor algorithm, specific parameters of the unknown sound signal with the specific parameters of the database (abstract; Figs. 3, 4-5 and 7-10; column 5, lines 8-25; column 6, lines 30-38; column 7, line 62 to column 8, line 16; column, 14, line 56 to column 15, line 14; column 15, line 66 to column 16, line 25; column 18, lines 10-58).



14. Claims 9-10 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5536902 to Serra et al. (hereafter as Serra).

15. Regarding Claim 9, Serra discloses a method for characterizing, according to specific parameters, a sound signal  $x(t)$  evolving over the time  $t$  during a duration  $D$  into different bands of frequencies  $k$  and then recorded  $x(k, t)$ , comprising:

storing the signal  $x(t)$  (Figs. 2-3, 6, 11; column 8, lines 39-59; column 9, line 58 to column 10, line 43),

calculating and storing the energy  $E(k, t)$  of said signal  $x(k, t)$  for each of said bands of frequencies  $k$ ,  $k$  varying from 1 to  $K$  and according a temporal window  $h(t)$  of a duration of  $2N$  ) (Figs. 2-3, 6, 11; column 9, line 58 to column 10, line 43),

calculating and storing the energy  $F(k, j, t)$  and the related phase  $\phi(j, k, t)$  of  $E(k, t)$  for the bands of frequencies  $j$ ,  $j$  varying from 1 to  $J$  ) (Figs. 2-3, 6, 11; column 8, lines 39-59; column 9, line 58 to column 10, line 43),

using a temporal window  $h'(t)$  of a duration of  $2N'$ , the  $J \times K$  values of the energy  $F(j, k, t)$  and of the related phase  $\phi(j, k, t)$  thus obtained constituting the specific parameters of an extract of a duration of  $2N'$  of the sound signal  $x(t)$  (Figs. 2-3, 6, 11; column 8, lines 39-59; column 9, line 58 to column 10, line 43), and

reiterating said calculation at regular intervals in order to obtain the universe of the specific parameters for the duration  $D$  of the sound signal  $x(t)$  (Figs. 2-3, 6, 11; column 8, lines 39-59; column 9, line 58 to column 10, line 43).

16. Regarding Claim 10, Serra discloses calculating for each frequency band  $j$  the mean value of the energy  $E(k, t)$  over  $2N'$  seconds, reiterating said calculation at regular intervals in order to obtain the universe of specific parameters for the duration  $D$  of the sound signal  $x(t)$ , and including the mean values obtained among the specific parameters of the sound signal  $x(t)$  (Figs. 2-3, 6, 11; column 5, lines 47-61; column 8, lines 39-59; column 9, line 58 to column 10, line 43; column 11, line 54 to column 12, line 15).

17. Regarding Claim 13, Serra discloses a device for identifying a sound signal, comprising: a database server comprising means for implementing the method for characterizing a sound signal according to specific parameters according to claim 9, and means for searching for said sound signal in the database (Figs. 2-3, 6, 11; column 5, lines 47-61; column 8, lines 39-59; column 9, line 58 to column 10, line 43; column 11, line 54 to column 12, line 15).

18. Claims 9-15 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5918233 to Blum et al. (hereafter as Blum).

19. Regarding Claim 9, Blum discloses a method for characterizing, according to specific parameters, a sound signal  $x(t)$  evolving over the time  $t$  during a duration  $D$  into different bands of frequencies  $k$  and then recorded  $x(k, t)$ , comprising:

storing the signal  $x(t)$  (abstract; Fig. 3),

Art Unit: 2615

calculating and storing the energy  $E(k, t)$  of said signal  $x(k, t)$  for each of said bands of frequencies  $k$ ,  $k$  varying from 1 to  $K$  and according a temporal window  $h(t)$  of a duration of  $2N$  (abstract; Figs. 3, column 7, line 56 to column 8, line 6),

calculating and storing the energy  $F(k, j, t)$  and the related phase  $\phi(j, k, t)$  of  $E(k, t)$  for the bands of frequencies  $j$ ,  $j$  varying from 1 to  $J$  abstract; Fig. 3; column 7, line 56 to column 8, line 6),

using a temporal window  $h'(t)$  of a duration of  $2N'$ , the  $J \times K$  values of the energy  $F(j, k, t)$  and of the related phase  $\phi(j, k, t)$  thus obtained constituting the specific parameters of an extract of a duration of  $2N'$  of the sound signal  $x(t)$  (abstract; Fig. 3; column 3, lines 34-67; column 6, line 56 to column 7, line 12; column 7, line 49 to column 8, line 6), and

reiterating said calculation at regular intervals in order to obtain the universe of the specific parameters for the duration  $D$  of the sound signal  $x(t)$  (abstract; Fig. 3; column 3, lines 34-67; column 6, line 56 to column 7, line 12; column 7, line 49 to column 8, line 6).

20. Regarding Claim 10, Blum discloses calculating for each frequency band  $j$  the mean value of the energy  $E(k, t)$  over  $2N'$  seconds, reiterating said calculation at regular intervals in order to obtain the universe of specific parameters for the duration  $D$  of the sound signal  $x(t)$ , and including the mean values obtained among the specific parameters of the sound signal  $x(t)$  (abstract; Fig. 3; column 3, line 34-67; column 6, line 56 to column 7, line 12; column 7, line 49 to column 8, line 6).

Art Unit: 2615

21. Regarding Claim 11, Blum discloses taking into account the specific parameters of a sound signal  $x(t)$  as the components of a vector representative of  $x(t)$ , positioning the vectors in a space of as many dimensions as there are parameters, defining the classes grouping the most proximate vectors, and recording said classes (abstract; Fig. 3; column 3, lines 4-33; column 6, line 14 to column 7, line 12; column 7, line 49 to column 8, line 6).

22. Regarding Claim 12, Blum discloses selecting from among the specific parameters, those parameters making it possible to obtain relatively large inter-class distances vis-a-vis the intra-class distances, and recording the selected parameters (abstract; Fig. 3; column 3, lines 4-33; column 6, line 14 to column 7, line 12; column 7, line 49 to column 8, line 6).

23. Regarding Claim 13, Blum discloses a device for identifying a sound signal, comprising: a database server comprising means for implementing the method for characterizing a sound signal according to specific parameters according to claim 9, and means for searching for said sound signal in the database (abstract; Fig. 3; column 1, lines 15-20; column 3, line 34-67; column 6, line 56 to column 7, line 12; column 7, line 49 to column 8, line 6).

24. Regarding Claim 14, Blum discloses a device for identifying a sound signal, comprising: a database server comprising means for implementing the method for characterizing a sound signal according to specific parameters according to claim 11, and means for searching for said sound signal in the database, wherein the means for searching comprise means for recognizing the class to which said sound signal belongs

Art Unit: 2615

and the means for comparing, by the method of the nearest neighbor algorithm, specific parameters of the unknown sound signal with the specific parameters of the database (abstract; Figs. 3 and 17; column 1, lines 15-20; column 3, line 34-67; column 6, line 56 to column 7, line 12; column 7, line 49 to column 8, line 6).

25. Regarding Claim 15, Blum discloses a device for identifying a sound signal, comprising: a database server comprising means for implementing the method for characterizing a sound signal according to specific parameters according to claim 12, and means for searching for said sound signal in the database, wherein the means for searching comprise means for recognizing the class to which said sound signal belongs and the means for comparing, by the method of the nearest neighbor algorithm, specific parameters of the unknown sound signal with the specific parameters of the database (abstract; Figs. 3 and 17; column 1, lines 15-20; column 3, line 34-67; column 6, line 56 to column 7, line 12; column 7, line 49 to column 8, line 6).

### ***Conclusion***

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey P. Chau whose telephone number is (571)272-7514. The examiner can normally be reached on Monday - Friday 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on (571)272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2615

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

September 26, 2006  
CPC

  
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9/29/06